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NOVAK DRUCE DELUCA & QUIGG, LLP
1300 EYE STREET NW
SUITE 400 EAST
WASHINGTON, DC 20005

EXAMINER

PRATT, HELEN F

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/487,000
Filing Date: March 07, 2000
Appellant(s): BROCKEL ET AL.

MAILED
DEC 08 2005
GROUP 1700

Jason D. Voight
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10-14-2005 appealing from the Office action mailed 6-15-05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(13)

Claim 22 was inadvertently admitted from the listing of the claims of the advisory action dated July 28, 2005. However, the claim was rejected in the final office action of 6-15-05.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4, 122,187	KOTANI et al.	10-1978
3,600,198	GONTHIER et al.	8-1971
EP0608975A1	van Ooijen	3-1994

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-19, 21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Ooijen (EP 0 608 975 A1) or Gonthier et al. in view of Kotani et al.

Van Ooijen discloses a composition containing an alkaline earth metal hydroxycarboxylate and a carboxylic acid, which can be potassium, magnesium and calcium as in claims 1, 2 and 5 (page 2, lines 20-56 and page 3, lines 1-15). The composition is seen to be a preservative since the claimed chemicals are disclosed and would have inherently had the claimed preservative effects (claim 6). The salts can be added to foods as in claim 16 (page 2, lines 9-20). Gonthier et al. disclose a preservative-type impregnated salt containing like acids and salts which can use a salt of magnesium (col. 1, lines 41-69) in amounts from 0.1 to 100/1 (col. 1, lines 64-73) as in claims 1, 2, 4, 5, 6. Claims 1-2, 5-6, 16 differ from the reference in the particular amount of acid in the product and in the particular particle size. The reference to Van

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Ooijen discloses 1-90%, preferably 40-60% hydrocarboxylic acid (page 3, lines 16-21).

No patentable distinction is seen at this time in the range of 0.5 to 30% absent a showing of unexpected results. Kotani et al. disclose the use of the claimed salts and acids as in claims 1, 2, 4-7 (abstract). The salts are disclosed as being within 100 to 200 mesh, which is within the claimed size (and col. 1, lines 58-70, col. 4, lines 5-70). Therefore, it would have been obvious to use amounts within the claimed amounts as shown by van Ooijen and Gonthier and to use the particle size of Kotani et al. in the composition of Ooijen or Gonthier.

Claim 1 has been amended to require that the carboxylic acid is liquid at 40 C. Van Ooijen discloses that a carboxylic acid can be liquid to impregnate solid calcium carboxylate of the hydroxycarboxylic acid. Since claim 1 is a composition claim only the composition needs to be considered and not whether one of the acids is liquid which is a method limitation.

“ The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the patentability of such claims is based upon the product formed and not the method by which it was produced. See *In re Thorpe* 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See *Ex parte Jungfer* 18 USPQ 2D 1796.”

Even so, it would have been obvious to use liquid acids in the claimed composition as disclosed by van Ooijen.

Claim 4 requires the same carboxylic acid and the same carboxylic acid salt.

The reference to Ooijen discloses using an alkaline earth metal carboxylate of a hydroxycarboxylic acid and another acid, which does not exclude using the same salt, which would breakdown to the same acid. Therefore, it would have been obvious to use salts, which give the same acid.

Claims 7 and 14 further require the use of carriers or formulation auxiliaries and agglomerating the mixture. Kotani discloses the use of glycerin, which is seen as a formulation agent (col. 1, lines 55-70). Other agents such as sugar, glycols, oil and sucrose are disclosed (col. 1, lines 55-70). Therefore, it would have been obvious to use known formulation agents in the process of van Ooijen or Gonthier et al.

Claim 14 additionally requires that the powders be agglomerated. Kotani et al. disclose that the sorbic acids are mixed with glycerin or other additives such as glycols, lactic acid, sucrose or oil. It is not seen at this time how the powders could not have been agglomerated because otherwise they would not have stayed together. Therefore, it would have been obvious to mix the double salts with various agents and to agglomerate them.

Claim 8 further requires a protective agent which is soluble or swellable in water at 20C. The glycerin of Kotani et al. is well known to be soluble in water at 20 C. Therefore, it would have been obvious to use glycerin as a protective agent.

Claims 9, 10, and 18 require that various agents can be protective agents. Kotani et al. disclose that lactic acid and propylene glycol or ethylene glycol have been

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added to the double salts (col. 4, lines 25-45). Therefore, it would have been obvious to add known protective agents to the double salts.

Claim 11 requires dusting powders. The specification discloses that these salts are known and have trade names. It is seen that dusting powders are well known and here are used for their known function of keeping materials separate. Therefore, it would have been obvious to use known dusting powders for their known functions.

Claim 12 is to the method of impregnating a carboxylic acid salt with an acid to a particular concentration. Kotani et al. disclose dissolving acids in ethanol and then adding a carboxylic acid salt (col. 2, lines 43-64). As the acid is mixed with the salt, it is seen that it is impregnated. Van Ooijen discloses that the acids can impregnate the carboxylate salt (page 3, lines 10-15). Claim 12 differs as in the composition claim in the particular amount of acid added. The discovery of an optimum value of a result effective variable is ordinarily within the skill of the art. In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). In developing a preservative, properties such as stability and shelf life are important. It appears that the precise ingredients as well as their proportions affect the stability and shelf life of the product, and thus are result effective variables which one of ordinary skill in the art would routinely optimize. Therefore, it would have been obvious to use amounts within the range of the reference for their known function of making an impregnated stable salt especially as the broad range has been shown.

Claim 15 further requires that the preservative is coated with a protective agent which is soluble or swellable in water at 20 C. Nothing is seen that glycerin as

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disclosed by Kotani is not soluble in water at 20 C. as it is a trihydroxy alcohol.

Therefore, it would have been obvious to coat the preservatives with a protective coating such as glycerin as disclosed by Kotani in the process or Van Ooijen or Gonthier.

Claim 17 further requires formulation auxiliaries. Formulation auxiliaries are disclosed as being sucrose, hardened oil, glycerides and glycerin by Kotani et al. Therefore, it would have been obvious to use such to act as formulation auxiliaries as claimed.

Claim 19 further requires the use of a protective agent which is a particular acid and salt. However, the references disclose that it is known to impregnate carboxylic acids with acids in general. Nothing is seen in the specification of using particular acids except in reduction of the smell of the product (Examples). Van Ooijen in particular discloses the use of salts of acetic and propionic acid. The reference discloses that mixing fumaric acid and an acid salt removes problems of odor and corrosivity (page 2, lines 49-55). Gallic acid is disclosed as one acid, which can be used and is within the claims (page 2, lines 45-49). Kotani et al. disclose using sorbic acid with potassium sorbate and it is disclosed that they have an irritating odor, which is mitigated with glycerin or other additives (col. 1, lines 5-6, 55-70). Gonthier discloses using propionic acid and sodium propionate, (col. 1, lines 56-70. Particular amounts of 1-90% are disclosed by Van Ooijen on page 3, lines 10-15. Therefore, it would have been obvious to make a composition containing the salts and acids as claimed as they are disclosed

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specifically by Gonthier, and the principles of using the acids with salts disclosed by the other references.

Claim 21 further requires that the preservatives are introduced into or placed on an item to be treated. Van Ooijen discloses that the claimed method masks the unpleasant odors of acids for ensiling. This method must show that the claimed compositions must be placed into the item to be treated, or the grains could not be ensiled (abstract). Gonthier discloses that fish are contacted with ice containing the salts (abstract). Therefore, it would have been obvious to introduce the preservative into the item to be treated.

Claims 23-25 further require various amounts of active substance from 68-75%. The specification discloses that the amounts are based on the total amount of carboxylic acids present in the salt and added" (page 3, lines 10-20). However, van Ooijen discloses that the salt can be impregnated with 1-90% of the carboxylic acid based on the total weight of the alkaline earth metal salt of the hydroxycarboxylic acid (page 3, lines 16-23). The preferable amount is from 40-60%. Nothing has been shown that there is any patentable distinction between 60% and 68% carboxylic acid. In addition, the reference discloses that impregnated salts can be used in a range that encompasses applicants' range. Therefore, it would have been obvious to choose a range which is close to the claimed range as shown by van Ooijen.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over van Ooijen (GB 0608975A) in view of Kotani et al. as applied to the claims above, and further in view of Gonthier et al.

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Claim 22 requires that the impregnated salts as in claim 1 contain a carboxylic acid salt, which is formic, acetic or propionic acid, which is impregnated with any of the above carboxylic acids. Gonthier et al. disclose that it is known to combine organic acids and their salts, in particularly, propionic acid with sodium propionate (col. 1, lines 45-64). It would have been within the skill of the ordinary worker to use enough of the acids and salts to make a solid or liquid composition, because van Ooijen et al., disclose such (page 2, lines 5-15). Kotani also discloses carboxylic acids and salts (col. 1, lines 3-15). Therefore, it would have been obvious to use particular carboxylic acids and salts as disclosed by Gauthier in place of the carboxylic salts of van Oaken et al. in view of Koran because Gonthier discloses the particular use of certain carboxylic salts as preservatives.

(10) Response to Argument

Appellants' arguments filed 10-14-05 have been fully considered but they are not persuasive.

Appellants' note that the examiner did not include claim 22 in the final rejections. However, claim 22 is rejected as found on page 7 of the final office action of 6-11-05. Appellants further state that claims 23-25 depend on claim 22 and therefore incorporate all the limitations of claim 22. Claims 23-25 were rejected in the final office action on pages 2 and 7. Even though these claims should have been part of the rejection for claim 22, their limitations were still addressed above. Certainly, if the application was allowed, these claims would go with claim 22.

Appellants argue that a person of ordinary skill in the art would not use van Ooijen and Kotani to teach their claimed invention of using an aliphatic carboxylic acid which is liquid at a temperature of 40 C or below, and that the acids of van Ooijen are solids which melt at 100 C and that Kotani uses salts of acids rather than acids in the preparation of sorbic acid double salts and aliphatic carboxylic acid which is liquid at 40 C and exhibits a sharp or pungent odor. However, claim 1 requires an impregnated salt of a particular size composed of a salt of a carboxylic acid and a liquid carboxylic acid. Van Ooijen teaches that "if the aliphatic carboxylic acid is a liquid, this liquid can be used to impregnate the solid calcium carboxylate of the hydroxycarboxylic acid" (page 3, lines 10-15). Appellants' specification discloses that it is important to use 30% or under of acid because otherwise the salt crystals stick together, and must be separated by a release agent and with more than 35% acid, the product is pasty (page 4, lines 20-40). However, Van Ooijen discloses that the mixture can be in "the form of a powder or granules" (page 3, lines 20-23). So Van Ooijen certainly knows how to make a product using the claimed amounts because a powder or granule can be produced. In addition, the reference to Van Ooijen is not limited to preferred salts as argued.

Appellants argue that there was no reason to use the aliphatic carboxylic acid in less than equimolar amounts. However, Van Ooijen discloses 1-90%, preferably 40-60 hydrocarboxylic acid (page 3, lines 16-21). Actually 1-30% is disclosed by the reference since it is within the 1-90% range. No patentable distinction has been shown in the use of even 30% acid as opposed to 40% acid as noted in the previous office action.

Appellants argue as to masking the odor of the impregnated salts of Van Ooijen. Van Ooijen does not disclose that there is a problem with odor.

Appellants argue that there is no reason to combine Kotani with Van Ooijen. However Kotani was used to show that the claimed mesh size of salts was known (col. 1, lines 58-70, col. 4, lines 5-70).

Appellants argue that as to claim 4 that the acid and acid of the salt should be the same. However, nothing has been shown of any unobvious results using the same acid.

Appellants argue as to Gonthier et al that it is a buffered system in liquid form. However, claim 1 does not require that the impregnated salts are in solid form. In addition Gonthier does not disclose that his compositions are liquid as in col. 1, lines 55-64. It is noted that grams per liter are used as measurements and grams are generally a measurement of solids (col. 2, lines 8-24). Kotani et al. was again used to show that the particle size of double salts is known. This reference can be used in combination to show the particle size was known even if a different method of making the composition was used.

Appellants argue that Gonthier et al. cannot be combined with van Ooijen since van Ooijen uses a salt with a lower pKa. However, Gonthier teaches combining organic acids and their salt, such as propionic acid with sodium propionate. Since this is known, the same could be done in the process of van Ooijen. The reference to Gonthier discloses that "the active mixture according to the invention is intended to be incorporated in the ice used for fish storing, it is advantageous to use 0.5 to 10 g. of

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mixture per liter of ice" (col. 2, lines 9-13). Grams of the mixture is not a liquid measurement. This composition is to be mixed with water at some point just as applicant's composition is. As to the use of buffers, at the beginning of Ex. 1, the reference says that "2 grams per liter of a mixture..... ". The composition is not a liquid until the 2 grams have been mixed with the liter of water. Also, as said above, the limitation that the acid is a liquid is a method limitation in a composition claim and is not given weight as only the composition need to be shown. As to Kotani, which is a secondary reference, is used for what it teaches. It is not seen how a product that has a mesh size is a liquid (col. 1, lines 58-70, col. 4, lines 5-70).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

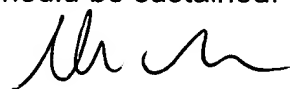
Helen Pratt, Primary Examiner




Conferees:

Milton Cano

Glen Caldarola



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700



MILTON I. CANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

HP
12-2-05